Remarks/Arguments

Claims 1-2, 4-23, 25-38, 40, 42-44 and 46-56 are pending in the above-captioned application, claims 3, 24, 39, 41 and 45 having been withdrawn herein. Claims 1, 8, 10-12, 15-16, 23, 25, 27-31, 33-37, 40, 43 and 46 are amended herein. Claims 1, 23, 40 and 43 are amended herein to incorporate language from a dependant claim. Accordingly, no new matter is added by way of this amendment. These claims were also amended to indicate that contact between the nanofibers and the surface is on a side surface of the nanofiber. This amendment is supported within the specification at, e.g., paragraphs 0044, 0045, 0051, 0057 and Figure 2. Accordingly, no new matter is presented.

I. Examiner Interview

Initially, Applicants are grateful to the Examiner for conducting a telephone interview with Applicant's undersigned representative on December 21, 2004, during which Applicant's representative and the Examiner discussed the outstanding Office Action and cited references and Applicant's arguments for overcoming the outstanding rejections. Applicant is grateful to the Examiner for his favorable remarks regarding the potential allowability of the claims presented herein.

II. Rejection Under 35 U.S.C. §102(e)

Claims 1-12, 14-20 and 23-55 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Knowles et al. U.S. Pat. Pub. 2004/0071870 ("Knowles"). In particular, the rejection opines that Knowles discloses a method of using an adhesive tape comprising: forming an adhesive tape by growing aligned nanofibers from a substrate, and placing the adhesive tape against a mating surface to produce van der Waals forces between the nanofibers of the tape and the mating surface.

Initially, Applicants note that the instant rejection, to the extent it is relying upon the Knowles reference, as cited, does not constitute prior art against the

present application as it possesses a filing date (June 17, 2003) that is after Applicant's earliest effective filing date (April 17, 2003). To the extent that the instant rejection relies upon the provisional patent application to which Knowles claims priority (not presently of record), then Applicants believe the present response shall overcome the rejection in its entirety.

Applicants respectfully point out that the Knowles reference does not, as the rejection appears to imply, teach any and all nanofibers, but in fact, speaks only to the use of carbon nanotubes. As such, and by way of example, originally pending claim 2, which is directed to only non-carbon nanotubes materials, cannot be anticipated by the disclosure of Knowles. In addition to the foregoing, Applicants respectfully point out than in each and every embodiment, figure and/or description contained within Knowles, the carbon nanotube arrays purported to be used as an adherent material are directly normal to the surface to which they would adhere, meaning that the nanotubes would, at best, contact the mating surface at the end. Applicants particularly direct the Examiner's attention to Figure 8, paragraphs 0042, 0062, 0071, 0080 and 0088 of the Knowles publication, all of which require that the nanofibers contact the surface to which adherence is desired, at the tips of such nanofibers. The presently claimed invention, on the other hand, recites that the nanofibers contact the second surface on a side surface of the nanofibers. As disclosed in Applicant's disclosure, such side contact affords greater adhesion than contact at the tips of such fibers, as is disclosed by Knowles. Accordingly, Knowles fails to teach or disclose the presently claimed invention, and in fact teaches specifically away from such invention.

III. Rejections Under 35 U.S.C. §103(a)

Claims 1-14 and 23-51 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Fearing et al. U.S. Pat. Pub. 2003/020888 ("Fearing"). The rejection on this basis is respectfully overcome for substantially the same reasons offered in overcoming the rejection based upon the Knowles reference, above. In particular, as with Knowles, Fearing requires that the stalks contact the adhering surface at the tips, rather than on a side surface (as is presently claimed in Applicants application), see, e.g.,

paragraphs 0051, 0057, 0126 and 0129, which all require contact at the tips and oriented nanostructures to provide adhesion. Further, Fearing appears to require that some additional protrusion or spatula be provided at such tip, further emphasizing the teaching that contact at the tips is a prerequisite of what is described by Fearing.

Again, as noted above, the present invention recites contact at side surfaces of the nanofibers to produce enhanced adhesion, which is clearly taught away from by both Fearing and Knowles.

Claims 1-13, 21-50 and 56 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Dzenis et al. U.S. Pat. 6,265,333 ("Dzenis"). The rejection on this basis is respectfully traversed. Applicants respectfully point out that Dzenis is directed to methods of strengthening a composite material, e.g., a polymer laminate, by the incorporation of fibers into that composite material. Applicants respectfully submit that this has little or no relation to the use of nanofibers as the adhesive element for joining the articles together through van der waals interactions.

Claims 1-56 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Tomanek et al. PCT Publication WO 99/40812 ("Tomanek"). Again, Applicants respectfully submit that the Tomanek reference fails to teach or disclose the presently claimed invention. In particular, Tomanek appears to be directed to a "hook and loop" configuration for joining articles together that is virtually indistinguishable from Velcro®. This relies upon a mechanical linking of two hooks or loops in order to join two articles together. The present invention, on the other hand, is directed to the use of nanofibers, and particularly contact with side surfaces of nanofibers, to join articles through the resultant van der waals forces. Accordingly, Applicants respectfully submit that the rejection based upon Tomanek is overcome, and its withdrawal is respectfully requested.

Appl. No. 10/661,381

Amnd dated January 13, 2005

Reply to Office Action of November 18, 2004

In view of the foregoing amendments and remarks, Applicants believe that the present application is in condition for allowance and action toward that end is respectfully requested. If the Examiner believes that a telephone interview would expedite the examination of this application, the Examiner is requested to contact the undersigned at the telephone number below.

Respectfully submitted,

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